involves any valid concerns. For instance, the costs of relocating existing users may be less with large spectrum blocks since licensees could more easily avoid certain frequencies encumbered by microwave users. Larger allocations could also lead to alternative services, such as larger bandwidth data or imaging services, and affordable equipment for consumers. However, since comparable efficiencies could be accomplished through issuance of tax certificates to microwave incumbents, and by allowing aggregation through group license bids, we are not persuaded that PCS technically requires 40 MHz of spectrum. Instead, we believe that the competition that would result from four or five licenses in each market will better serve the public interest, and foster maximum economic opportunities. For these reasons, we conclude that 20-25 MHz is a reasonable allocation of spectrum for PCS. To ensure that small businesses are not excluded from licensing opportunities due to the use of competitive bidding, we also support at least one 20 -25 MHz allocation for small business PCS applicants in the lower band. In any event, the amount of spectrum for the small business allocation should be consistent with the predominant spectrum block allocations.

Conclusion

As indicated before, our vision of PCS leads us to endorse direct mechanisms for promoting economic opportunities rather than rely on indirect "trickle-down" approaches. Nevertheless, we are aware that small service areas and spectrum blocks will provide only a limited number of opportunities for small service providers. Because fixed and operating capital requirements will deter many small companies from participating in PCS as licensees, strategic alliances with larger entities may well be a practical economic necessity for many small companies. For these reasons, we construe the principle of economic opportunity broadly to encompass diverse forms of commercial participation, such as procurement of goods and services and strategic alliances. We examine ancillary opportunities below in the context of regulatory proposals addressing bidding preferences and other procedures.

Bidding Methodology

Bidder Eligibility Conditions

Background. We strongly endorse the principle of encouraging the widest possible participation by private enterprise in PCS development. Some have suggested that the Commission should condition eligibility to bid on minimum procurement efforts as a means to further minority and small business enterprise. For instance, the National Association of Black Owned Broadcasters points out that "the Commission must create a system of minority incentives similar to those used by other agencies and departments of the Federal government."[27] APC likewise notes that several agencies of the federal government, such as the SBA and the Department of Defense, employ incentive policies to provide small business participation in auctions of government property rights.[28] We note, however, that the Commission has not requested comment on either of these approaches. In our view, if the regulatory structure for PCS fails to include these types of participatory safeguards, it will fail to achieve the widest possible participation by private enterprise.

General Bidder Eligibility Requirements. We agree that the interest in the widest possible participation could be furthered by requiring a "trustee" commitment from PCS bidders. As a basic condition of eligibility, we believe all bidders should be required to establish and maintain programs designed to ensure that minorities and women are not excluded from licensee efforts to procure equipment and value added services, and to recruit, hire and promote employees. Regulations dealing with employment and procurement practices of PCS regulatees, such as those currently applicable to cable television system operators, can be justified as necessary to enable the FCC to satisfy its obligation under the Omnibus Budget Reconciliation Act to ensure that the regulatory structure for emerging technologies fosters economic opportunity, competition, and new and expanded telecommunications services.[29] As Congress, and the Commission acknowledged in the cable context, employment and procurement opportunities are significant areas of economic opportunity which enhance the prospects for telecommunications ownership by minorities and women. In the long run, employment and procurement opportunities should also reduce capital formation difficulties businesses owned by minorities and women face due to lack of technical and managerial experience in the telecommunications field.

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27 Letter of James L. Winston, Esq., Executive Director and General Counsel, National Association of Black Owned Broadcasters, May 27, 1993, p. 2.

28 We believe targeted policies encouraging employment and procurement opportunities for minorities and women are consistent with range of economic opportunities made possible by programs of other federal agencies. The SBA's section 8(a) procurement program identifies government contracts that should be awarded only to small disadvantaged firms. 13 CFR §124.307 et seq. The Department of Defense uses targeted policies to reach its statutory goal of awarding five percent of its contracting and subcontracting dollars to small disadvantaged firms. See generally, DFAR 219.5.

29 Compare, NAACP v. FPC, 425 U.S. 662 (1976). See also, Non-discrimination in Common Carrier Employment Practices, 24 FCC 2d 725 (1970).

Cellular and LEC Bidding Requirements. In the interest of economic opportunity, we also support entry provisions for rural cellular licensees and LECs. However, we do have strong reservations about the merits of allowing unconditional eligibility for large cellular licensees and LECs in view of the potential for anti-competitive warehousing of spectrum. The need for restrictions on cellular eligibility presents an opportunity to encourage small business participation. While we are somewhat skeptical about the franchisee relationship as a primary means to promote viable opportunities for new entrants, we view bona fide local consortia, and joint venture arrangements, as a reasonable quid pro quo for eligibility for large cellular and LEC entities -- if they provide new entrants with an equity ownership stake in the licensee entity. We believe this proposal is justified by the fact that the overhead and competitive position of these firms are substantially enhanced by pre-existing infrastructure. Unless eligibility to pursue local licensing opportunities is conditioned on a requirement to form strategic alliances with new entrants, the viability of licensing opportunities for small applicants may be reduced.

Financial Certification Guidelines

In order to realize the full potential of competitive bidding to streamline the licensing process, we believe it is appropriate to permit applicants to self-certify financial qualifications, as outlined below. First, the Commission should affirm that a small applicant may support all, or a substantial part, of the required financial showings with a proposal for an initial public offering, as in Advanced Mobile Phone Service, Inc., 91 FCC 2d 512, 517 (1982). There, the Commission held that an investment banker's letter, combined with the applicant's internal funds and bank commitments, constituted a reasonable assurance.[30] In addition, the Commission noted that the rules contemplate that "applicant might need equity financing," and while this was a case of first impression, the IPO proposal deserved "careful analysis" because "we never before licensed such costly facilities..." Id. We believe the need of PCS applicants, especially minority owned applicants, for equity financing to cover the unprecedented cost of acquiring construction permits and building PCS facilities likewise

30 The Commission cited three factors to justify its holding: (1) a large and experienced investment banker was familiar with the marketplace's reaction to the applicant's offerings based on three previous successful financings; (2) the banker had analyzed the applicant's ability to develop additional, sophisticated mobile communications services; and (3) a group of qualified lending institutions had established credit for the applicant aggregating approximately two thirds of the funding required for construction of the proposed cellular facilities.

justifies combined use of "highly confident" letters, letter of intent and commitment letters to satisfy applicable financial qualifications.

Second, the Commission should adopt financial qualifications guidelines that treat SBA chartered Small Business Investment Companies (SBICs) and Specialized Small Business Investment Companies (SSBICs), as bona fide financial institution for reasonable assurance purposes.[31] The source of an SSBICs capability to act as a de facto financial institutions for small entities stems from their ability to leverage $3 - 4 from the SBA for every $1 of equity capital from private sources pursuant to the Small Business Investment Act of 1958.[32] As such, SBICs are an integral part of the national policy encouraging development of small business, frequently come under the FCC's ancillary jurisdiction by virtue of the assistance they render to FCC regulatees. In this regard, we note that "Administrative agencies have been required to consider other federal policies ... when fulfilling their mandate to assure that their regulatees operate in the public interest... [A]gencies should constantly be alert to determine whether their policies conflict with other federal policies and whether such conflict can be minimized... [E]stablishment of policies that would accommodate ... diverse interests ... is [also] in keeping with the overall agency responsibility.[33] Treating SBICs as financial institutions is consistent with both the Commission's overall responsibility, and its stated policy for purposes of cellular financial commitments, that "we do not wish to exclude smaller entities with the financial ability and genuine desire to finance cellular systems."[34] As indicated in the section below on tax certificates, we believe tax certificates would also enhance the financial ability of SBICs to assist FCC regulatees.

Innovator Bidding Credits

Background. Of course, the central concern over the use of competitive bidding lies in

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31 Compare, Application for Review of Salt City Communications, Inc. in MM Docket 89-311 (August 6, 1993) (File No. BPH-870918MN).

32 Storer Broadcasting Company, 70 FCC 2d 709 (1979). SBICs are allowed to leverage $3 from the SBA per $1 of private capital, while SSBICs can leverage $4 per $1 of private capital.

33 LaRose v. FCC, 494 F. 2d 1145 (D.C. Circuit 1974).

34 Rules for Rural Cellular Service, 4 FCC Rcd 2542 (1988). See also, Washington's Christian Television Outreach, Inc., BC 002820, released August 19, 1981) (Hearing Designation Order).

potential adverse effects on opportunities for new entrants.[35] To avert spectrum inefficiency and exclusion of innovative and efficient service providers, the Act gives the Commission broad discretion to establish flexible payment methods. Specifically, the Act requires the Commission to "consider alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods that promote the [economic opportunity] objectives..." There are several ways the Commission can use this discretion to respond to requests for policies to promote superior service efforts to the public and "economic opportunity".

While the details of the various proposals differ, a common theme among them is the demand for appropriate recognition of innovative proposals for equitable distribution of service to the public, and spectrum-efficient infrastructure sharing arrangements that encourage new entry. For example, American Mobilecomm Technologies, Inc. and Digital Spread Spectrum Technologies, Inc. advocate a "host license" arrangement for firms offering specialized PCS services. APC states that by adopting a program that would establish and guarantee "technology affiliations" with a PCS licensee to secure a portion of the licensee's overall licensed areas, small business could share a portion of the licensee's facilities, particularly in switching and access management functions, and other services, such as billing, marketing, maintenance, technical matters, and accounting. CalCell Wireless advocates an "infrastructure preference" for PCS applicants that commit to serve and operate in designated enterprise zones and promote participation by racial minorities. MCI advocates a consortium approach with opportunities for small, minority and female entrepreneurs. NABOB contends that major companies deriving substantial benefits from FCC licenses should be required to joint venture or otherwise participate with minority companies. SBPA recommends a Small Business Developer's License for experimental licensees who have put forth significant effort and investment in developing the service being licensed. Tampa Electric Company calls for partnering incentives between 2 GHz incumbents and PCS licensees based on the wholesale licensee concept.

Discussion. These proposals indicate that the Commission could protect the public interest in the use of spectrum by authorizing alternative methods of bidding, bid calculation, and bid

35 Letter of Hon. Larry Irving, Assistant Secretary for Communications and Information, to David Honig, trustee, Minority Media Ownership Fund, June 17, 1993.

payments for bidders with superior service proposals. In particular, alternative bidding calculations would allow technical and non-technical innovators to discount a percentage of the bid the applicant would otherwise pay based on a qualitative assessment of the applicant's business development proposal. To qualify for the credit, bidder would have to qualify as (a) a member of a designated group, or (b) as a consortia owned and controlled by firms owned by members of the designated groups. The business development proposal could establish eligibility for credits based on multiples of expenditures for research and development on spectrum efficiency incurred by the applicant; the projected value of the bidder's commercial activities to the community of license; or the value of public services the bidder proposes to offer. Public service could include, for example, provision of on-the-job training or work-study relationships with local educational institutions. We believe a ten percent credit for individual small business entities is an adequate incentive for this purpose. For business development proposals involving consortia, the consortia should be allowed to elect a combination of credits and installment payments reflecting the quantifiable value of the proposal involved, not to exceed twenty five percent of the total bid.

Installment Payments and Royalties

Where small entities bid, but make no superior service proposal, the Commission can foster economic opportunities by allowing unconditional installment payments with or without royalties. Consistent with the purpose of the Budget Reconciliation Act, this approach would permit winning small bidders to elect to make payments over time, and thereby reduce the up-front capital requirements the prospective licensee must have to bid. However, we are somewhat uncertain about the net value of royalty payments to small businesses. MCI points out that the recovery of $4 billion in the form of auction bids from PCS licenses over the next five years would equate to an effective charge of $12 per PCS customer per month. This is roughly 25 percent of expected revenues, assuming 1.6 million PCS customers in 1994, and 9 million in 1998. The burden of this surcharge for spectrum access, it is asserted, would "eliminate the ability of new PCS entrants to compete against the entrenched [cellular incumbents]."[36] For these reasons, we do not view royalties as the optimal solution to the entry cost problems of small business bidders.

Distress Sales

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36 Steve Zecola, MCI, supra, note 26.

The broadcast distress sale policy has some promise as a model for an economic opportunity safeguard. In the broadcast context, licensees designated for hearing have the option to assign the license to a minority firm for 75% of market value or less. Distress sales serve the dual public interests in diversity of ownership and administrative efficiency by obviating the need for costly and time-consuming hearings to resolve alleged violations of Commission rules, while remedying informational and financial barriers to market entry for historically underrepresented groups. In the PCS context, a distress sale policy could achieve analogous administrative equities and efficiencies.

In order to assure prompt delivery of PCS services to the American public, the Narrowband PCS Order provides that failure by any licensee to meet construction requirements will result in forfeiture of the license and the licensee will be ineligible to regain it. At the present time, however, no provisions for the disposition of the narrowband or broadband PCS licenses exist. The distress sale concept could answer this problem by granting forbearance on royalties or installment payments if the defaulting licensee assigns the license to a new qualified small business entrant. Unlike the broadcast distress payment, however, the assignee of a PCS distress sale license would assume all or part of the licensee's obligation.

Another variation of the distress sale concept might apply where tentative winners are ineligible, unqualified, or unable to pay, such as in the context of multiple license bids. We believe the Commission should impose penalties on parties that knowingly abuse the bidding process. This policy could also include a distress sale option to create incentives for defaulting bidding to assign construction permits to small entities.

Communications Capital Fund

Spectrum auctions would benefits designated groups to a greater extent if a portion of the revenues from spectrum auctions were reinvested in small businesses seeking to enter the communications field.[37] Accordingly, we recommend that the Commission seek legislation from Congress to establish an investment fund small businesses. Alternatively, the Commission could explore with the NTIA and the SBA whether an executive order can and should be adopted to

37 Prof. Andrea Johnson, Statement before the SBAC, May 27, 1993, p 6.

accomplish this end.

Tax Certificates

Background

The SBAC has reviewed numerous expressions of interest in routine issuance of §1071 tax certificates for various PCS transactions. The SBA Office of Advocacy, through a spokesman who participated in our May hearings, informally endorsed consideration of the use of tax certificates for investments in SBA licensed investment companies. Several parties also advocated various proposals for issuance of tax certificates to entrepreneurs in PCS industries.[38] Numerous parties in the Emerging Technologies proceeding submitted comments in support of the Commission's subsequent determination that Docket 90-314 is eligible for §1071 treatment, and that issuance of tax certificates is necessary to facilitate relocation of microwave licensees in the 2 GHz frequency band.

Discussion

At the outset, we are compelled to acknowledge certain criticisms involving allegations of misrepresentation and rapid transfer of facilities acquired with tax certificates. For example, the 1958 amendments to the tax certificate statute resulted from some cases in which broadcast properties were intentionally acquired in excess of the applicable multiple ownership rules, and then improperly sold in an attempt to obtain certificates that would not otherwise be available. While we are not aware of any recent deliberate abuses along these lines, we believe IRS authority to rescind tax certificate benefits upon a finding by the Commission that a sale or exchange under the policy involved fraud or misrepresentation operates as a strong structural deterrent to abuse.[39] We are also aware that the one year holding period requirement applicable to minority owned facilities acquired under §1071 has been criticized. The one year rule, however, was adopted in a Commission action repealing anti-trafficking rules and was not originally a part of the tax certificate policy.[40] The solution to this problem, therefore, would appear to be the reinstatement of a lengthier holding period for all broadcast licensees.

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38 The parties include representatives from a coalition of civil rights groups, the Coalition to Improve the Tax Certificate Policies, and American Personal Communications, Inc.

39 Cloutier v. United States, 709 F.2d 480 (7th Cir. 1983).

40 Prior to that time, minority owners, like other licensees, were routinely required to hold the license for a minimum period of three years Amendment of Section 73.3597 of the Commission's Rules, 99 F.C.C. 2d 971,973, 974 (1985).

While we are concerned by these criticisms, we believe the benefits of the policy far outweigh the disadvantages. First of all, §1071 authorizes capital gains deferrals, rather than capital gains exemptions, tax credits, or across-the-board tax rate reductions. In this regard, the benefit of the tax certificate is more comparable to an interest-free government loan equal to the taxable portion of the gain. Moreover, as with involuntary conversions of property covered by §1033 of the Internal Revenue Code, the policy also leverages private investment by requiring entrepreneurs to use the entire gain from the sale to reinvest or reduce basis in retained property. This means that for every dollar in taxes the taxpayer avoids, the tax certificate leverages about three dollars of private reinvestment capital, for public interest investment, that were not subject to taxation in the first instance. We note that the government also captures tax revenues from the jobs associated with the buyer's grandfathered property, from jobs associated with the seller's replacement property, and from the sale of the depreciated or replacement property if the sale produces a taxable gain.

Conclusion and Summary of Recommendations

Due to the important capital leveraging benefits, and apparent fiscal neutrality of the policy, we support extending tax certificate treatment to microwave licensees and SBA chartered investment companies that promote small business participation in PCS deployment. We also urge the Commission to revise the existing minority tax certificate program. At the same time, it has come to our attention that the U.S. House Subcommittee on Select Revenue Measures will hold hearings on proposals to deter abuse of the tax certificate policies. We support these efforts to deter abuse of the public trust and intend to work closely with the Commission and the Congress to ensure, to the extent possible, that no abuses result if the proposals we endorse below are adopted.

Microwave Tax Certificates. The basic justification for issuing tax certificates to microwave licensees is that deployment of broadband PCS technology cannot commence until the 2 GHz frequency band allocated for PCS is vacated. The rules give most incumbents three years to relocate voluntarily with the assistance of tax certificates, however, some incumbents are exempt from these rules. We believe these rules should have two economic opportunity components. First, we propose that the Commission consult with the IRS on ways to encourage incumbents seeking tax certificate treatment for relocation to satisfy replacement property requirements by investing in small business concerns. Second, we propose that the Commission issue tax certificates to exempt microwave licensees that establish PCS consortia or joint ventures, and extend equity ownership opportunities to small business concerns, upon divestiture of their interest in the consortia or venture. Giving exempt incumbents the option to participate in the development and implementation of PCS facilities, by forming small business consortia, could accelerate speed of deployment while meeting financial and technical assistance needs of small business concerns.

SSBIC Tax Certificates. We also agree with the SBA Office of Advocacy that the Commission should consider extending tax certificates to encourage investment by, and in, SBA chartered SSBICs that provide debt and equity financing, and technical assistance, to licensees and applicants owned by members of minority groups and women. Integration of the Commission's tax certificate program with the SBA's SSBIC program is appropriate for several reasons. Tax certificates would make SSBICs specializing in telecommunications more competitive with venture capital firms in other fields as a result of tax advantaged capital gains deferrals. This would also enhance their ability to syndicate debt and equity securities for small business participation in PCS development and implementation. As we pointed out before, passive investors, including SSBICs, have long been subject to the FCC's regulatory jurisdiction by virtue of assistance provided to FCC licensees.[41] Finally, cooperation between the FCC, SBA and IRS would also help contain the potential for abuse.

Minority Tax Certificates. Finally, the use of tax certificates to promote minority ownership of non-broadcast facilities has been advocated for over a decade.[42] At the recommendation of the 1982 FCC Advisory Committee on Alternative Financing Strategies for Minority Telecommunications Ventures, members of Congress introduced proposals for extension of §1071 to non-broadcast transactions in 1983. In 1990, the League of United Latin American Citizens, the National Association

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41 While the resources available to SSBICs are modest compared to chartered banks and savings and loan institutions, the Commission has stated for purposes of cellular financial commitments that "we do not wish to exclude smaller entities with the financial ability and genuine desire to finance cellular systems." Rules for Rural Cellular Service, 4 FCC Rcd 2542 (1988) See also, Washington's Christian Television Outreach, Inc., BC 002820, released August 19, 1981) (Hearing Designation Order).

42 For a discussion on the use of minority tax certificates in the broadcast area, see Krasnow, Kennard, and Temkin, Maximizing the Benefits of Tax Certificates in Broadcast and Cable Ventures, Hastings Communications and Entertainment Law Journal, Volume 13, Number 4 (Summer 1991).

for the Advancement of Colored People, the National Black Media Coalition, and the National Hispanic Media Coalition, petitioned for issuance of tax certificates for satellite transponder enterprises. In 1992, the Coalition to Improve the Tax Certificate Policies petitioned the Commission to expand the tax certificate policy to promote investment by joint ventures and specialized minority venture capital funds in common carrier and non-mass media technologies. The recent passage of the Budget Reconciliation Act eclipses the various legal ambiguities and technicalities that have encumbered consideration of these proposals. For reasons we have already substantially explained throughout this report, we believe the time has come to take action. Therefore, we urge the Commission to respond favorably by announcing that in the future it will follow the expansive definition of "broadcasting" applied in Telocator Network of America, 58 RR 2d 1443 (1985), recon dismissed, 1 FCC Rcd. 509 (1986) in reviewing requests for PCS tax certificates pursuant to the Statement of Policy Regarding Minority Ownership In Broadcasting, 52 R.R. 2d 1301 (1982).

CLASSIFICATION STANDARDS

Background

The SBA administers a variable standard for determining whether an entity is small for purposes of obtaining financial assistance from an SBIC. The standard permits an applicant to qualify based on a net worth not in excess of \$6.0 million with average net income after Federal income taxes for the two preceding years not in excess of \$2.0 million. Alternatively, the applicant can qualify by showing that together with affiliates, and excluding affiliates, it meets the size standard for the industry in which it is primarily engaged as set forth in §121.601. See, 13 CFR 121.802(a)(2). Regarding the latter test, PCS fits the definition of a radiotelephone service which the Census Bureau includes in standard industrial classification code 4812. SBA standards define "small" in that SIC code as firms that employ 1,500 employees or less. 13 CFR 121.610. In addition, SBA guidelines contain provisions for waiver whereby applicable thresholds are increased by 25% whenever an applicant agrees to use the SBA's assistance within a "labor surplus area" or "redevelopment area." §121.802(d).

Discussion

The basic problem with the existing standards is that these standards were not tailored to implement the economic opportunity provisions of the Budget Reconciliation Act. The existing net worth/income size standard is probably too low for an industry that will be as capital intensive as the PCS industry. The service area and bandwidth recommendations would not be effective if the classification excludes independently owned and non-dominant firms with the wherewithal to construct PCS facilities that may cost from $50 - 100 million. On the other hand, size standards based on a threshold of 1,500 employees is too high. This threshold runs the risk that the vast majority of the entities covered by SIC Code 4812 would be eligible for bidding preferences and tax certificate assistance even though these entities face no special history of exclusion or economic disadvantage.

If the Commission concurs that a new standard should be established, it will also have to determine whether the Small Business Act governs its discretion to prescribe numerical size standards for determining whether an entity is small. Prior to the Small Business Credit and Business Opportunity Enhancement Act of 1992, federal agencies could establish size standards for activities not covered by the Small Business Act by merely consulting with the SBA Administrator. The 1992 amendments limit agency discretion by requiring agencies to promulgate size standards based on gross receipts indices that are be approved by the SBA Administrator and to comply with SBA policies regarding the formulation of the standards.[43] The Act, however, does not "impair the ability of an agency to implement small business size standards without obtaining SBA's concurrence in response to a specific statutory direction or a general legislative authorization to prescribe small business size standards." Thus, if the Commission determines that the Budget Reconciliation Act constitutes a specific statutory direction, consultation with the SBA Administrator should suffice for procedural purposes.

__Conclusion__

Consistent with our focus on capital formation and utilization of SBICs, we believe size standards should be consistent with the SBA's approach to eligibility for financial assistance from SBICs; however, we also believe different thresholds need to be established. We believe the

43 Under the SBA's proposed regulations to implement the Act, an agency may prescribe a size standard different from that determined by the SBA under three conditions. First, the standard is being proposed after an opportunity for notice and comment. Second, the standards provide for size determinations of concerns providing services based on average gross receipts over a period not less than three years. Third, the size standard must be approved by the SBA Administrator.

appropriate method of resolving this issue is to request comment on this point in future proceedings in this Docket. As a starting point for discussion, the Commission should seek comment on whether to set the threshold at $20 million, with waivers of up to 25% for entities that use federal assistance in labor surplus areas. The Commission should solicit the SBA's assistance and cooperation so that to ensure that a proper standard is set regardless of which procedure prevails. Regarding control criteria, we believe minority and female controlled entities should be subject to anti-trafficking requirements, should maintain 51% equity and voting control from the initial grant through construction and operation of the PCS license.

SUMMARY AND CONCLUSION

We believe the proposals we endorse in this report are responsible efforts to promote economic opportunity and fair to all concerned. Both the public, especially small businesses and residential consumers, will benefit from the enhanced spectrum efficiencies and innovations that will likely result from spectrum set-asides for small businesses, and incentives for strategic spectrum sharing alliances with small businesses. In addition, we have tailored our recommendations on bidding preferences, tax certificates, and certification of financial qualifications, to address serious capital formation difficulties which have the potential to distort PCS development and implementation. If adopted, we believe these proposals would, in a moderate way, mitigate the persistent barriers that African Americans, Hispanic Americans, Native Americans, and Asian Americans, have encountered in their long quest for parity of ownership in telecommunications, while also empowering women to extend the tremendous strides they have made in other fields of the economy to the field of telecommunications. We also believe that the measures we propose will benefit small rural telephone companies by guaranteeing these entities the opportunity to compete for licenses in their local areas, and by supplementing financial and technical assistance available the financial assistance of the Rural Electrification Administration.

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UNITED STATES DEPARTMENT OF COMMERCE

MBDA

MINORITY BUSINESS DEVELOPMENT AGENCY

A MARKET ANALYSIS OF THE TELECOMMUNICATIONS INDUSTRY- OPPORTUNITIES FOR MINORITY BUSINESSES

Developed by SYMBIONT, Inc.

August 20, 1991
(Contract 50SAAA000038)

A MARKET ANALYSIS OF THE TELECOMMUNICATIONS INDUSTRY:

VOLUME II - OPPORTUNITIES FOR MINORITY BUSINESSES

August 20, 1991

PROJECT TITLE: **MARKET ANALYSIS OF THE TELECOMMUNICATIONS INDUSTRY**

VOLUME II: OPPORTUNITIES FOR MINORITY BUSINESSES

PREPARED FOR: **MINORITY BUSINESS DEVELOPMENT AGENCY, DEPARTMENT OF COMMERCE**

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MBE Opportunities

INTRODUCTION

This second volume of "A Market Analysis of the Telecommunications Industry" reviews the most promising industry segments in terms of where opportunities lie for existing and potential minority business enterprises (MBEs). Using information from industry associations and secondary sources, segment profiles have been developed which provide essential background for any MBE contemplating expansion or entry in the telecommunications industry.

The determination of what constitutes a "promising" segment was based on a number of factors: projected segment growth, known opportunities, limited barriers to entry, positive regulatory climate, and areas where successful MBEs have been identified. The identification of promising market segments was limited to the SIC codes within the scope of work.

Participation in the segments presented will require effort, study, and risk analysis on the part of any entrepreneur who seeks to enter the business. These segments are not so dominated by the large players that there isn't room for smaller ones. This volume provides market segment analysis for:

4812 Radio Telephone Communication Services
1. Cellular RadioTelephone Services
2. Mobile Radio and Specialized Mobile Radio (SMR)
3. Radio Paging Services
4. Personal Communications Networks (PCNs)

4813 Telephone Communications
1. Messaging: Voice Processing and Electronic Mail

4841 Cable and Other Pay Television Services
1. Cable TV services
2. Wireless Cable (MMDS)

7375 Online Information Retrieval Services

CELLULAR RADIOTELEPHONE SERVICES

This segment has seen phenomenal growth since 1985. Today there are over 5.3 million subscribers. Industry analysts are fairly consistent in predicting growth, but at much slower rates then seen in the past. Opportunity to enter the segment as a cellular service operator is extremely limited. One MBE was identified that operates a cellular service.

Future growth will be based on the development of a consumer market, whereas the phenomenal growth of the past has been based on business users. This will provide opportunities for MBEs as equipment distributors and/or agents of one of the cellular service operators. Eleven MBEs were identified which are providing exactly those services.

MOBILE RADIO AND SPECIALIZED MOBILE RADIO (SMR)

Mobile radio as a service is mature with little growth expected. However, SMR offers opportunity. Costs of new service start-up are estimated to be in the $100,000 to $150,000 range. SMR service may be attractive to consumers and small businesses that have a requirement for two-way mobile communication of voice or data in a specific geographic area. As licensed SMR operators, MBEs could target such consumers and small businesses. Two MBEs were identified in this area. Both are so new, founded in 1988 and 1990, that they had yet to generate revenue.

RADIO PAGING

Paging services have enjoyed exceptional growth over the last ten years. The Paging segment is a market where large and small players readily coexist. Paging is in competition with cellular telephone and mobile radio services. As in cellular, the consumer market remains untapped but is a major potential subscriber base. Cost of entry to develop and offer a paging service could be as little as $40,000 depending on location. Opportunities for MBEs exist in starting or acquiring a paging service in rural or small to mid-sized markets which are currently unserved. An MBE can also serve as an agent/distributor for established operators. One MBE was identified that offers paging services combined with electronic mail and facsimile to medical doctors.

PERSONAL COMMUNICATIONS NETWORKS (PCN)

PCN is so new that the FCC has not allocated spectrum for it, has issued a Notice of Inquiry as to possible uses and requirements, and has issued experimental licenses to companies which are using borrowed spectrum from services that they already have access to. As the U.S. population's thirst for more and faster communications grows, the advent of the pocket telephone can not be far behind. The question is whether the existing cellular services will evolve to this level. If they do there won't be any need for special Personal Communications Networks. What makes this segment so very interesting is that several major cable TV services as well as the cellular operators are interested in PCN, believing that they have the technology and infrastructure to provide the service. PCN is a market segment that merits watching for future opportunity for MBEs.

MESSAGING: VOICE PROCESSING AND ELECTRONIC MAIL

Messaging services have been around for quite some time with the use of telegram, telex and cables for rapid delivery of written messages, and answering services for phone messages. It is only in the last five to ten years, however, that businesses and consumers have awakened to the power of electronic communications. Voice and electronic mail services allow users to be reached directly or indirectly at any time.

The Messaging segment focuses on the integration of voice processing and electronic mail. The current/future trend is to integrate these services. Voice processing, including voice mail, call processing, and audiotext, is expected to be the highest growth segment in telecommunications and had revenues in 1990 of $1.57 billion. Electronic Mail revenues were estimated to be $574 million in 1990 which includes public services and the costs for equipment and software associated with private services. Technological developments such as voice synthesis and voice recognition, sophisticated applications such as electronic mail to fax and transaction processing, and the strong push by the Regional Bell Operating Companies (RBOCs) to make these types of products available to residential and business customers will continue the high growth trend.

Due to the focus on sophisticated applications and the integration of software, hardware and networking, this segment should be of interest to computer-oriented MBEs. Seven MBEs were identified offering messaging services that included: designing and providing voice processing systems and software, leasing voice mail boxes, audiotext, value added reselling, designing and providing interactive voice response systems, and providing a service bureau. The majority of these MBEs are small with less than 15 employees and had prior experience in other computer-oriented areas such as software development. Cost of entry includes the price of the hardware and software required to develop systems. Other areas within messaging with low cost entry are designing and implementing systems, training users, and providing system monitoring and analysis. Messaging is definitely a market segment to be investigated by MBEs interested in entering telecommunications.

CABLE TELEVISION

The introduction of fiber optics and digital technology make cable television a market segment well positioned for future application growth. The number of channels envisioned in the near future will outstrip available video programming, thus offering numerous channels for communication and information distribution to the home. Subscriber growth will continue but at a much slower rate than in the first five years. Cable TV is estimated to be an $18-$21 billion industry. Entry as a cable operator is impacted by two factors: the majority of franchises have been awarded and new system construction costs are high. However, minorities have made some inroads in acquiring cable systems through judicious use of FCC policies. Currently, cable system prices are somewhat depressed owing to uncertainties about industry re-regulation, the amount of debt initially assumed by companies in constructing systems, and the realization that high subscriber growth rates will no longer continue. While this provides opportunity, the lack of available financing makes acquisition a tough process. For these reasons, cable tv ownership is probably the least attractive of all of the segments studied. However, cable TV is well positioned for the future of communications in the U.S. regardless of what direction it takes. There were 15 MBEs identified that own and operate cable systems. MBEs with strong financial resources should consider this segment.

WIRELESS CABLE

Wireless cable or multichannel multipoint distribution service is an entrepreneurial industry. It is still possible to get a license to construct a system. Construction costs are reasonable, particularly when compared to conventional cable, and there is no competition from major companies. Financing is difficult because investing sources aren't familiar with the technology or the potential. The Wireless Cable Association spent the last few years trying to prove that wireless cable is economically viable and a strong alternative to other technologies such as Direct Broadcast Satellite (DBS) and cable TV for video programming. Wireless cable is most attractive for specific geographic locations, i.e. dense metropolitan areas and flat topography found in the West, Southwest and Midwest. One MBE owner was identified who is an investor in several wireless cable systems and owns a wireless cable system in Texas. With appropriate financial backing, MBEs can construct and operate wireless cable systems, or invest in such systems.

ONLINE SERVICES

Online services, also referred to as videotext, is a $7.2 billion market segment. Traditional use of online services has been through libraries, universities, and research departments. Business use of online information has had steady growth with most applications centered on finance and credit information. What has yet to materialize is consumer use of these databases although a number of companies have tried to tap this market over time. Today there are over 2,000 online databases in the U.S. and over 500 online service providers. The Bell Operating Companies have been permitted restricted participation in consumer online services. They have been allowed to provide "gateway" services which involves presenting a user with a menu format which allows for selection of certain databases and access to those databases. Consumer/customer response has not been overwhelming. Subscriber growth is a function of the number of personal computers in the home.

Online services does provide low cost entry for any MBE interested in offering this type of service. As an information provider, the secret to success is in defining specific information that users want or need and that is of a perishable nature so that users have to continue using the service. Another opportunity in online services is as an intermediary between a user (generally a business customer) and the online services providers. Many of the online information services are not particularly "user friendly" and can take some specialized knowledge to maneuver through the information databases without running up exorbitant costs. Three MBEs were identified that provide this type of service.

This study provides in depth information on each market segment in the following format:

I. Market Definition
II. Market Environment
   A. Current Status of Market
   B. Sizing
   C. Constraints
   D. Geographical/International Issues
   E. Players - Competition
   F. Sources of Information
III. Market Strategy
   A. Modes of Entry
   B. Timing Considerations
   C. Cost of Entry
   D. Critical Factors for Success
IV. Opportunities for MBEs

It is expected that potential and existing telecommunication MBEs will use this information as a stepping stone for new entry or further expansion in the telecommunications industry.

Telecommunications Study:
MBE Opportunities

SCOPE/PURPOSE OF THE STUDY

This study is based on a requirement of the Minority Business Development Agency (MBDA), Department of Commerce, to examine minority participation in the telecommunications industry. Volume I addresses Tasks I and II of the four Tasks included in the Statement of Work (SOW). The SOW and the requirements for Task I and II are quoted as follows:

> To collect and analyze market data on minority involvement in the American telecommunications industry.
>
> The telecommunications industry is defined here as telephone voice and data communications products and services and includes leasing telephone lines or other methods of telephone transmission, such as optical fiber, microwave, satellite, radiotelephone and telegraph. (See Standard Industrial Classification Codes 366 and 48.)
>
> Minority Business Enterprises (MBEs) have been precluded from this area primarily because of industry structure. The purpose of this project is to thoroughly investigate the telecommunications industry to discern the peculiarities of the market, i.e., the market size, the labor and financial needs of the typical firm, the market competition, and the market opportunities as they relate to the industry as a whole and also to MBE participation.
>
> <u>Requirements</u>
>
> Task I
>
> Define the minority business participation in the telecommunications industry, from both a general and specific industry perspective, so as to obtain a comprehensive picture of the telecommunications industry and MBE participation for the development of a MBDA program strategy.
>
> General Industry - MBE role in aggregate telecommunications industry, to include, but not be limited to present participation, numbers of firms, industry share, firm size, etc.
>
> Specific Industry - MBE role in specific telecommunications industry subsegments, e.g., mass media (radio, television), information services, calling/paging